UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Mr. Ken Tu
USDA/USFS Strategic Planning Office
Colorado Roadless Rule
740 Simms Street
Golden, CO 80401

Dear Mr. Tu:

In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) reviewed the U.S. Department of Agriculture, Forest Service's (USFS) November 2015 Supplemental Draft Environmental Impact Statement - No. 20150322 (SDEIS) for the North Fork Coal Mining Area exception of the Colorado Roadless Rule.

Background

The USFS, in cooperation with the State of Colorado, proposes to reinstate the North Fork Coal Mining Area exception of the Colorado Roadless Rule (CRR) on approximately 19,700 acres of National Forest System lands in the North Fork Coal Mining Area of Colorado. This provision was originally included in the CRR effective on July 3, 2012. In September 2014, the District Court of Colorado vacated the North Fork Coal exception based on NEPA violations. The Court also vacated the Bureau of Land Management (BLM) and USFS' approved modifications to leases in North Fork for the West Elk mine and the agencies' approval of an exploration plan. The SDEIS issued in November 2015 was prepared to respond to the deficiencies identified by the court and supplements the 2012 Final EIS for the CRR.

The primary deficiency with the original NEPA analysis for the CRR was the agency's failure to adequately consider greenhouse gas (GHG) emissions and climate change. Therefore, this SDEIS takes a close look at the GHG emissions associated with three alternatives. Alternative A is the No Action Alternative, which would not create a North Fork Coal Mining Area exception, and thus would continue the current management under the Colorado Roadless Rule; this alternative would effectively mean coal mining in the North Fork area could not occur. Alternative B, which is USFS's preferred alternative, would reinstate the North Fork Coal Mining Area exception, allowing temporary road construction for coal mining related activities. Alternative C would establish the North Fork Coal Mining Area exception but over a smaller area, excluding lands recently identified as "wilderness capable" through a relevant Forest Plan revision process.

As originally prepared, this SDEIS was the principal vehicle for considering the impacts on climate change of opening this large area for future coal mining. However, since the SDEIS was issued, on January 15, 2016, the Department of Interior (DOI) issued Order No. 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program" to undertake a comprehensive review of the federally managed coal program. DOI's stated purpose for this review is to consider whether and how the program may be improved and modernized to foster the orderly development of BLM administered coal on Federal lands. DOI announced that the programmatic EIS (PEIS) will review how development impacts important stewardship values while also ensuring a fair return to the American public, and will consider, among other things, the impact on climate change of the BLM coal leasing program. While that review is undertaken, Order No. 3338 institutes a pause in all new thermal Federal coal leases, lease sales and lease modifications by BLM. Section 6 of Order sets out a number of exceptions to the pause, some of which may apply to existing leases in the North Fork. Because coal leasing in the North Fork area is managed by BLM, all new leases in that area are subject to the recently announced Order No. 3338. Therefore, as a practical matter, there will be a programmatic review of the climate impacts of coal leasing before any decisions are made on new coal leases in the North Fork. The analysis in this SDEIS of climate impacts from potential coal leases in the North Fork Valley will therefore be supplemented with the broader analysis that DOI will undertake, and that analysis will guide BLM's decisions on any future new leases in the North Fork. Therefore, while this SDEIS will help guide USFS's decision on the CRR, that decision will no longer govern consideration of climate with respect to coal leasing in the North Fork. The DOI PEIS will be the controlling review with respect to climate impacts and leasing decisions by the BLM.

While the SDEIS will not be the only, or the controlling, review of the climate implications of coal leasing in the North Fork, consideration of climate impacts does appropriately influence the USFS's decision on this rule. Hence, it remains important to have the climate analysis be as complete and accurate as possible, and it is for that reason EPA offers these comments on the SDEIS.

The SDEIS outlines a reasonable framework for climate analysis starting with estimating the direct and indirect GHG emissions associated with the three alternatives, including consideration of market adjustments, and then attempting to monetize the social costs of the expected increase in GHG emissions. This basic approach makes sense, and we appreciate the thought that USFS gave to this SDEIS. In addition to this basic framework, EPA recommends that all thorough reviews of climate impacts consider ways to mitigation GHG emissions; that issue is particularly important in this case, where mitigation could potentially be very important.

EPA has some concerns about specific choices and assumptions that the USFS used, as well as the clarity of description of these choices, which we recommend be remedied in the Supplemental Final Environmental Impact Statement (SFEIS). These are briefly described below. We have also included detailed comments in the enclosure for your consideration.

Emissions

EPA appreciates the information that the USFS has provided on the coal production and emission assumptions and calculations from the North Fork coal mine area. The analysis reports

cumulative GHG emission increases of up to approximately 160 MMT CO_2Eq. and 90 MMT CO_2Eq, under Alternatives B and C, respectively. USFS appropriately puts emphasis both on GHG emissions associated with combustion of the coal that could be mined, and the methane associated with the mining of the coal. A robust consideration of methane is appropriate because, as the SDEIS notes, the North Fork geology results in coal mines with methane emissions among the highest levels of any mines in the country. The consideration of methane is also important because it presents opportunities for mitigation, discussed further below. To estimate the likely increase in GHG emissions over what would otherwise occur, USFS first uses an economic model to estimate the energy production and electricity generation changes resulting from the project. USFS then estimates the corresponding change in GHG emissions using three different North Fork (NF) coal production rate assumptions. EPA has a number of comments about how this analysis was conducted, which are described in more detail in the enclosure. A few of the key points are summarized below.

Overall, the analysis could be improved by using updated versions of the models and incorporating current regulations and market conditions into the model runs. If USFS does not update the analysis, we recommend the SFEIS include a robust discussion of the limitations and likely implications of the outdated modeling assumptions on the projected changes in energy production, electricity generation, and carbon dioxide (CO_2) emissions. For example, it is important that the baseline scenario used in the modeling appropriately account for the Clean Power Plan (CPP), which places obligations on states to reduce CO_2 emissions. Including an accurate representation of the CPP and its expected impacts could alter the landscape of the analysis significantly. In addition, we recommend USFS explicitly acknowledge the limitations associated with the ad hoc assumption regarding the proportion of production expected to be exported and the caveats it warrants in interpreting the results of the analysis. Finally, the SFEIS should clarify that the market analysis is based on USFS' application of the Integrated Planning Model and clearly delineate the assumptions used.

Mitigation

According to the SDEIS analysis, approximately 12% - 20% of the estimated net cumulative GHG emissions resulting from the proposed project would be from methane released and not captured or flared during mining operations of the North Fork Mining area. Given these estimated emissions, EPA thinks that an environmental review should appropriately consider the significant opportunities to reduce those emissions. EPA continues to recommend that the SFEIS discuss potential opportunities for methane mitigation in more detail.

Specifically, we recommend that, rather than wait to consider methane mitigation at the project specific stage, the SFEIS provide that information and clarify that disturbances necessary to collect and combust or use methane vented from the mines would be allowable.

We also recommend that the SFEIS clarify that other equipment such as compressors, flares, oxidizing units, etc. will all be temporarily allowed within the roadless area to reduce methane emissions. The USFS has discretion to condition leases on USFS land, so consideration of these important mitigation measures is an appropriate subject for this SDEIS. We have included more information in the detailed comments for your consideration

Monetization of GHG impacts

The monetization of the climate change impacts associated with the projected GHG emission changes is central to the benefit cost analysis of this project. Given its importance, EPA has several recommendations regarding the USFS' methodology, which may affect interpretation of the findings.

When monetizing the climate change impacts of changes in CO_2 emissions, we strongly recommend the USFS analysis remain consistent with current federal guidance and uniform agency practices. One example of the SDEIS' inconsistency with federal guidance is the use of a 10^{th} percentile social cost of carbon (SCC) estimate in the main analysis. We also recommend that, in accordance with OMB's guidance, the primary focus of the analysis be on the global boundary level results that reflect the full (global) damages caused by CO_2 emissions.
When monetizing the climate change impacts of changes in methane emissions, we recommend that the USFS use newly available estimates of the social cost of methane. We recommend the results be presented as part of the main analysis of the SFEIS. We provide more detailed comments on the monetization of both CO_2 and methane emissions impacts in the enclosure.

Conclusion

The SDEIS conclusion that Alternatives B and C would "likely have no effect on climate change impacts in CRAs, or other NFS lands" (p. 49) is misleading. According to the quantitative analysis, the CO_2 emissions increases alone (not including methane) result in potential net costs of up to $12 billion. These are significant impacts by any measure. While the potential impacts identified in the SDEIS are large, the January 2016 announcement from DOI, which happened after the SDEIS was completed, now demonstrates that a more thorough review of climate impacts will be done before any new leasing decisions not subject to Section 6 of Order No. 3338 are made in the area covered by this SDEIS, and there will be a pause on new leases while that analysis is undertaken. Based on that fact, and the analytic concerns identified in this comment letter, EPA is rating the SDEIS as Environmental Concerns – Insufficient Information (EC-2). We recommend that the issues raised in these comments be addressed in the SFEIS for this project. We have enclosed a copy of EPA's rating criteria for your information.

EPA appreciates the opportunity to offer comments on the SDEIS and would like to continue to work with the USFS as it completes its SFEIS.

Enclosures

Sincerely,

Karen Jeff for

Shari Wilson
Acting Director
Office of Federal Activities

Summary of Rating Definitions and Follow-up Action

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC–Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3–Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

SDEIS - Colorado Roadless Rule - Detailed Comments

Social Cost of Carbon

The SDEIS methodology to monetize impacts of CO_2 emission changes deviates from federal guidance and standard agency practice in several respects.

First, the Forest Service global level analysis includes results based on a fifth social cost of carbon (SC-CO_2) value with equal prominence alongside the results based on the four SC- CO_2 estimates recommended by the Interagency Working Group (IWG) on the Social Cost of Carbon and currently used by all Federal regulatory agencies. That is, the analysis uses the 10th percentile SCC value from the frequency distribution of SCC values based on a 3% discount rate and argues this estimate is needed "to provide a lower bound SCC value to 'complete' the range of SCC values based on a 3% discount rate (i.e., IWG, 2015 refers to average and 95th percentile SCC values based on a 3% discount rate, but provides no corresponding lower percentile SCC value)" (SDEIS, p. 85). This reasoning is inconsistent with the IWG's rationale for aggregating and selecting the final recommended range of SCC estimates, especially the purpose of using the 95th percentile SCC estimate based on a 3% discount rate. The 95th percentile SCC estimate was included in the recommended range of estimates "to represent higher than expected impacts from temperature change further out in the tails of the SCC distribution" (IWG (2013, revised 2015), p. 2),[1] not to show the probability distribution around the 3% discount rate based SCC. Furthermore, there is no statistical or economic foundation presented for considering the 10th percentile estimate to represent a "lower bound" SCC. We strongly recommend the Forest Service drop the use of the 10th percentile SCC estimate in the final SEIS.

Second, the SDEIS inappropriately focuses on the national and forest boundary level analysis rather than relying primarily on the global analysis. As discussed at length in the 2010 SCC Technical Support Document (TSD)[2], the IWG SCC guidance recommends agencies focus attention on the full (global) impacts of changes in U.S. CO_2 emissions because of the distinctive global nature of the climate change problem. Any secondary results based on domestic only damages should be presented with statements highlighting the highly speculative and provisional nature of the domestic share (7-23%) of global damages, per IWG SCC guidance. In addition, we recommend dropping the forest level analysis altogether as this geographic boundary is arbitrary and provides no meaningful information to the public or decision makers about the market or climate change impacts of the proposed action.

Finally, we recommend revising the description of what the SCC is (and isn't) and the development of the IWG SCC estimates and deleting entirely the incorrect and misleading comparison of SCC and observed carbon credit prices (which Forest Service points to as a reason for omitting the 5% discount rate based SCC estimate in the national level analysis). We are happy to provide your staff with suggested line edits to address this issue in the relevant sections of the SDEIS and Appendix E. We also suggest replacing the use of "present net value" with standard benefit-cost analysis terminology throughout the SDEIS.

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[1] Interagency Working Group on Social Cost of Carbon. 2013. Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866. May (revised July 2015). United States Government. https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf.

[2] Interagency Working Group on Social Cost of Carbon. 2010. Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866. February. United States Government. http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-forRIA.pdf.

Social Cost of Methane

The SDEIS incorrectly states that "[t]here is no standard or accepted methods of analyzing the social cost of methane" (SDEIS, p. B-9), and considers the climate impacts of changes in non-CO_2 GHG emissions (namely, methane) in sensitivity analysis only using a seemingly GWP-based approximation approach (although few details and no results of this analysis are presented). We recommend the Forest Service review the existing literature on social cost of methane estimates, and consider using newly published and peer reviewed estimates of the social cost of methane that are consistent with the IWG SCC methodology. (For a description of these methodologies, see EPA's Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector (August 2015) .)

Market Analysis

The SDEIS market analysis is based on outdated modeling. If there is no opportunity to update the analysis, we recommend the Forest Service add a robust discussion of the modeling limitations and the likely impact the outdated assumptions have on the energy production, electricity generation, and CO_2 emission results.

First, we recommend the Forest Service revise the IPM analysis, or at a minimum highlight the limitations and implications of the outdated IPM modeling assumptions. For example:

- The electricity sector modeling platform that the Forest Service used (IPM v5.13), with modifications, conforms to conditions that are three to four years old, and whose underlying assumptions might overstate the future domestic demand for coal. In more recent versions of IPM used by EPA (such as IPM v5.15 that EPA used for the final Clean Power Plan):
    - Electricity demand has been revised downward, consistent with more recent EIA AEO forecasts. This revision has notable implications for projections and future demand for electricity among competing sources.
    - Natural gas supply assumptions have been updated, such that gas prices are slightly lower than the v5.13, putting additional competitive pressures on coal as a fuel for electric generation.
    - Coal supply adjustments have also been made, leading to lower prices overall. The SDEIS incorrectly describes EPA's assumptions as being out of date (Appendix E). EPA has updated its assumptions for coal supply (and many other assumptions) and is currently using a more current version of IPM. We recommend the FEIS highlight the out of date nature of some of the assumptions that the Forest Service has chosen to use, and should not characterize them as EPA choices or the EPA model that is currently being used. EPA has also accounted for roughly 35 GW of known coal retirements that are planned to occur over the next few years, or have already occurred since IPM v5.13 was finalized.

  All of these factors tend to make coal-fired generation less competitive in the domestic marketplace. Hence, the projected increases in coal production resulting from the proposed action may be misstated for the domestic market.

- Although the IPM analysis used in the SDEIS assumes a carbon price on electricity sector emissions, there is no discussion of this (or the Clean Power Plan (CPP)) in the analysis. We recommend adding an explanation for how the carbon price modeling choice was made, how it was implemented in IPM, and to what extent this price can provide a proxy for the CPP. The CPP provides states with flexibility in implementation, including the option to adopt various rate-based and mass-based

trading programs to reduce CO_2 emissions. It would be useful for the FEIS to include discussion of how this flexibility and how potential differences in the implicit stringency of the finalized state goals from the proposed CPP will impact the results.

- The SDEIS does not adequately distinguish between EPA's use of IPM, including the assumptions EPA uses, and the use of IPM in the SDEIS. We recommend the SDEIS list all the assumptions chosen by the Forest Service in their application of IPM and the source of those assumptions, specifying where it borrowed assumptions from EPA's older version of IPM.
- The SDEIS can be revised to indicate that the supply curves that EPA used 4 years ago did in fact include North Fork mines. EPA did confirm (via WoodMac) that the coal supply curves include the North Fork area (Elk Creek, West Elk, and Bowie). So the statement "EPA was not able to provide a definitive answer..." (Appendix E, pg. 14) should be changed.

Second, we recommend that the Forest Service add an explanation for the use of the hypothetical 3 coal production scenario approach to estimating impacts, instead of only using the IPM output as the basis of all impacts analyzed in the SDEIS.

Third, we recommend the Forest Service discuss the caveats associated with applying a fixed coal export assumption (10% of Uinta basin coal production per year) over the entire time period of analysis. The FEIS should highlight that no modeling was conducted to determine what export assumption to include.

Mitigation for Methane Waste Gas

The SDEIS specifically considers the issue of methane capture and reduction and defers more detailed analysis of alternatives for methane gas mitigation "because critical design criteria that bear upon the feasibility of such capture mitigation are too speculative at this time" (SDEIS, p. 9). EPA disagrees with this characterization of the state of knowledge. All coal mines in the North Fork Coal Mining Area are well informed about methane capture systems, as they all deploy gas drainage systems to supplement their ventilation fans. In fact, representatives of West Elk Mine and Elk Creek mines have given presentations describing their gas drainage and use activities at past EPA Coalbed Methane Outreach Program (CMOP) events, and CMOP has provided funding for pre-feasibility studies at the West Elk mine in the past.

We encourage the Forest Service to review the EPA comments to the 2014 Bureau of Land Management's (BLM) Advanced Notice of Proposed Rulemaking seeking comment on waste mine methane capture, use sale or destruction which provided a detailed summary of U.S. coal mine methane capture and use options. Among other things, EPA's August 4, 2014, memorandum to BLM included a summary of technologies available for the capture and use of waste mine methane.[3] The summary was drawn from more detailed publications, including peer-reviewed articles, available on the EPA website at: http://epa.gov/coalbed/resources/index.html. In addition, CMOP maintains an online model that allows for quick calculation of project costs, available at: http://epa.gov/coalbed/resources/cashflow_model.html. Although the model is intended to derive a first order cost assessment of waste mine methane projects, it does provide a reasonable estimate of project costs, including table of Notional Costs of Waste Mine Methane Drainage Projects as well as a

[3] EPA's 8/4/2014 memo is available at www.regulations.gov, see document ID BLM-2014-0001-0029.

list supporting references.

Additional Detailed/Expositional Recommendations

Chapter 2

- Offsets bullet on page 9: EPA/OAP did not understand the objective of this bullet but notes that there is no federal offsets program.

- Pg. 10, second bullet: The report mischaracterizes the CPP, as it relates to IGCC. The CPP covers only *emissions* from existing sources, and includes no specific requirements on fuel use.

Chapter 3

- **Units of Measure:** The SDEIS uses the terms "tons", "metric tons" and "metric tons CO_2e" throughout the document when discussing greenhouse gas emissions (for example, Page 20, Table 2-2, Air Resources section vs. the end of page 32). It is unclear in several places whether the unit specified in the SDEIS is the actual unit of measure the emissions were calculated in, or if the terms "tons" or "metric tons" were used as shorthand for "metric tons CO_2e" (Table 3-19 for example). A consistent unit of measure should be used throughout the analysis and that unit should be referred to consistently. EPA recommends using "metric tons CO_2e" for all greenhouse gas emissions values presented, as this is what is used in EPA's Greenhouse Gas Reporting Program (GHGRP) Facility Level GHG emissions database, which the SDEIS uses as an input in the life-cycle analysis, and EPA's Inventory of Greenhouse Gas Emissions and Sinks, which is referenced in the analysis.

    - **Conversion Factors:** The conversion factors for methane from tons to standard cubic feet could be added as a footnote in addition to the listing of the source of those values (Upstream Dashboard tool's Unit Reference tab). It is also not clear where the coal production values were derived from; a reference to the source of those values should also be added. (Ch. 3, pg. 35)

- **Inconsistent use of outdated Global Warming Potential (GWP) for methane:** The SDEIS does not use a consistent GWP. The SDEIS uses a GWP for methane of 36 to calculate total CO_2 equivalent emissions from three different scenarios. Subsequently, the SDEIS compares these values to the U.S. GHG Inventory. The values cited from the U.S. GHG Inventory are calculated using a GWP for methane of 25. Reported emissions to the GHGRP from 2 mines are also cited. These reported emissions are also calculated using a methane GWP of 25. EPA uses GWPs from the IPCC's Fourth Assessment Report (AR4) consistent with international GHG reporting standards under the United Nations Framework Convention on Climate Change (UNFCCC) which require the use of the GWP values from the IPCC's AR4 report, published in 2007. In order to provide an apples to apples comparison between the potential emissions in each scenario to the selected benchmarks, consistent GWPs should be used. To be consistent with international and national GHG reporting, it is recommended that the SDEIS use GWPs from AR4, and therefore EPA recommends recalculating the emissions scenarios using a methane GWP of 25 (for example table 3-20, and for the data from the 2010 Colorado state GHG

emissions inventory). The GWP used in the SDEIS for N_2O was 298, which is consistent with the U.S. GHG Inventory and GHGRP.

- **2014 GHG Reporting Program Data:** The analysis cites facility level emissions from the 2011-2013 period and states that the data were pulled from the GHGRP database in "2015". 2014 GHG emissions data for these mines was published in October, 2015. The SDEIS likely made use of 2011-2013 data which was available earlier in 2015, prior to the release of 2014 data. The authors should review the 2014 data to determine if it should be included in the analysis. The 2011-2013 data currently posted should also be reviewed as GHG reports may have been re-submitted by these mines between August 2014 and August 2015. Revised emissions totals would have been made publicly available in October 2015. (Ch. 3, pg. 35, 43)

- **Coal Mine Names:** EPA's GHGRP emissions data is presented in metric tons CO_2e, not tons. In addition, the SDEIS refers to one of the two coal mines using a different name than is presented in the GHGRP's emissions database. Use of consistent names, or a footnote that provides the GHGRP name for each facility, or a link to each facility's reported GHGRP data would make it easier for the public to re-create the analysis. (Ch. 3, pg. 35, line 4)
  - "Elk Creek Mine" is referred to as "Oxbow Mining, LLC" in the GHGRP Database. The following link points to this facility's 2014 data: http://ghgdata.epa.gov/ghgp/service/facilityDetail/2014?id=1009623&ds=E&et=&popup=true
  - "West Elk Mine" is found in the in the GHGRP Database: http://ghgdata.epa.gov/ghgp/service/facilityDetail/2014?id=1010310&ds=E&et=&popup=true

Other comments

- The SDEIS conclusion that Alternatives B and C would "likely have no effect on climate change impacts in CRAs, or other NFS lands" appears inconsistent with the SDEIS finding that presents substantial estimates of social costs from increased CO2 emissions (e.g., an upper bound estimate of $12 billion in net costs). We recommend revising the statement about impacts of Alternatives B and C to reflect the actual analysis contained in the SDEIS.

- The SDEIS misunderstands the purpose of a climate analysis under NEPA by suggesting that such analysis is difficult or impossible because emissions from one project cannot be tied to a specific local impact. Such statements do not reflect an understanding of the nature of climate change, in which incremental additions to GHG emissions collectively cause significant change to climate. For this reason, the appropriate way to evaluation the impact of a project on climate change is through analysis of emissions, as CEQ said in its draft guidance. For this reason, we recommend deleting the following sentence from the SFEIS "It is not possible at this time using global climate models to predict the contribution to warming or other climate change effects (such as changes in the timing and distribution of precipitation or other weather events) from possible coal production on a local scale such as the North Fork Coal Mining Area." (Ch. 3, pg. 40 (PDF pg. 48)).

- The discussion on pp 47-48 has some language that misconstrues the nature of the climate challenge and the necessity of action to combat it. We recommend that this language be changed in the final.

    - At the top of page 48 of the DSEIS there is a sentence that implies that because climate change is caused by a multitude of sources, it will continue no matter what happens with any individual project. We recommend deleting this sentence, because it suggests that no action is necessary because no one action solves the problem all by itself. We recommend saying instead that the global nature of climate change requires many individual actions over many decades, so that the analysis accurately reflects both the importance of the issue and the necessity for all individual actions to consider their contribution to the problem. This perspective is particularly important given the time scale on which climate pollution operates; a substantial portion of CO2 emitted into the atmosphere is not removed by natural processes for millennia. The combination of incremental carbon pollution contributions from many individual projects and the long lived impacts of such emissions require that every project carefully evaluate and mitigate emissions.

    - The sentence about CEQ misstates CEQ's meaning, by suggesting CEQ is saying that individual actions make no difference. That is the opposite of CEQ's meaning; because many actions will be necessary to combat the collective problem of climate change, it is important that agencies consider emissions and ways to reduce emissions for every project. We suggest the following edits: "The Council on Environmental Quality recognizes that no single individual agency action will solve climate change by itself, and that attention to individual project emissions is important because climate change is exacerbated by a series of smaller decisions, 'program-by-program and step-by-step.' Emissions from single actions and projects contribute to continued climate change, and emissions reductions from single actions and projects contribute to slowing the pace of climate change. " (Excerpt from SDEIS, Ch. 3, pg. 47/PDF pg. 55)

    - **Land use emissions and potential impacts on forest carbon pools**: The SDEIS acknowledges that "there are reasonably foreseeable emissions from subsequent decisions, associated with tree-cutting and other vegetation for surface preparation, including roads and drainage pads" but concludes that such potential terrestrial emissions would be small compared to those associated with other primary elements evaluated and quantified (pg. 48/PDF pg. 56). The rationale given here appears to assume that the net effects of this terrestrial disturbance is zero or close to zero without any analysis or discussion of GHG emissions effects or timing. Also, the text implies that assessment of potential terrestrial GHG emissions impacts from future road construction and related projects in the intended area is not warranted. To the extent that it is required as part of a NEPA review, a qualitative discussion of the potential impacts on forest carbon pools, and the associated timing of those potential emissions effects should be included.

- **Methane emissions factor**: Table 3-20 summarizes methane emissions as a result of the energy mix changes and alternative underground and surface mining. While the surface mining emissions estimates based on an emission factor for the Power River basin appears to be consistent with the U.S. National Greenhouse Gas Emissions Inventory, it is unclear why an emission factor for an Illinois Number 6 coal mine profile was referenced for underground mines, as that does not appear to be relevant. We recommend clarifying the relevance of this reference.

Appendix E

- The use of elasticities in the analysis (Appendix E) - It would be helpful to clarify if some estimation was done outside of IPM, and what that estimation included.

- The coal transportation assumptions in v.5.13 reflect a much higher diesel outlook (characteristic of 2012) rather than the price forecast we expect today. Also, there have been some substantial changes in western rail rates that EPA is in the process of updating. The Assessment may want to address any potential impact this may have on its findings.

- EPA does not have adequate information to evaluate whether the USFS adjustments to the coal supply curve are appropriate. EPA's coal supply curves used in IPM v5.13 reflect production and reserves from the North Fork area (including the West Elk, Elk Creek, and Bowie mines). The USFS analysis added additional mining capacity and reserves to the supply curves reflecting North Fork area mining expansion, so USFS should verify that this is, in fact, truly incremental mine capacity and reserves and not simply a double counting of mine capacity already included in the supply curves.

- It may be beneficial to evaluate whether costs need to be adjusted to reflect any incremental Freight on Board cost associated with the new location of the active mine.

    - Appendix E (page E-4) – This section inappropriately conflates EPA's application of IPM, and the coal supply curves used in IPM v5.13 with the USFS version of IPM used for this analysis. The report should distinguish this analysis more clearly as separate and distinct from EPA's application of the model.
    - For example, the following statement in the SDEIS is not a proper characterization: "The coal prices that the EPA coal supply curves produce..." A more accurate statement would be: "The coal prices produced by USDA/FS IPM modeling are...."
    - We also recommend that USFS include a footnote, or some introductory language at the beginning of the Appendix that explains that USDA/FS has adjusted coal supply curves developed by EPA in 2013 for purposes of this SDEIS, but all analysis, modeling, projections used in the SDEIS are solely the work of USDA/FS, and not EPA .